

## **Appendix 1: Public Comments and BLM Responses, 30-Day Comment period closed April 8<sup>th</sup>, 2016**

### **Bendire Complex Fire ESR Invasive Plant Management Environmental Assessment DOI-BLM-ORWA-V000-2016-0027-EA**

The Bendire Complex Fire ESR Invasive Plant Management Environmental Assessment (Bendire EA, or EA) and a draft Finding of No Significant Impact (FONSI) statement were provided to the public for 30 days for review and comment on March 9, 2016. All identified interested publics and the appropriate American Indian Tribes were notified directly, as well as public notices published in the pertinent newspapers.

The BLM received comments that were specific to the Bendire Complex Fire ESR Integrated Invasive Plant Management Plan and project area. The IDT reviewed these comments and provided responses in this Appendix 1 to the Decision Record. The BLM also made minor changes to the Bendire EA and those are reflected in Appendix E of the EA document.

Additional comments from the public were received, reviewed by the IDT and responses developed. However, these are not listed below because they were not site specific to the Bendire Complex Fire ESR Invasive Plant Management Plan EA and Project Area. These comments and responses are filed in the Bendire Complex ESR EA Project Record and are available on request.

Bendire ESR Invasive Plant Management Plan-specific comments are summarized below or cited with page numbers from the document in parentheses. BLM responses follow each comment.

#### **Blue Mountain Biodiversity Project (BMBP) Comments**

**Received April 8, 2016 via email and April 12, 2016 via certified mail – return receipt requested.**

#### **Comment #1**

“We are concerned that aerial spraying of Imazapic on up to 30,000 acres will not accomplish the goals set forth in the purpose and need of the Bendire ESR Plan” (p.1).

The commenter is also concerned with prevention efforts to limit additional expansion from outside vectors such as grazing and vehicles.

#### **BLM Response:**

The overarching Purpose and Need for Action in the EA is “...to stabilize, rehabilitate and protect the area burned by the Bendire Complex fires...” This includes improving habitat, working with other landowners and managing agencies, minimize unacceptable effects and restore native vegetation and function (EA:3-4). The analysis of the effects of wildfire on the

burned area includes creating an opportunity for several invasive annual grasses - as well as noxious weeds - in and adjacent to the fire (Noxious and Invasive Weeds Section [EA:55-62], Fire and Fuels Management [EA:85-87 and Wildlife Section [EA:48-54]). Recent fire history in the area has shown that these undesirable species can rapidly dominate the burned area.

Multiple actions are considered through the EA, including analyses of actions currently planned or implemented to restore wildlife habitat, protect sensitive ecosystems and encourage the re-establishment of native vegetation. A dominant threat identified in the Greater Sage-Grouse Approved Resource Management Plan Amendment (ARMPA) for Oregon (2015, p.1-29) is the decreasing fire return interval resulting from an abundance of invasive annual grasses. Broad scale treatments of priority areas in the Bendire project area to reduce or eliminate invasive annuals through the treatment of highly susceptible acres with imazapic is expected to reduce the spread of invasive annual grasses (see Table 2.5).

Imazapic is effective on not only the designated noxious weed grasses medusahead and ventenata, but as well as the extensive areas of cheatgrass (EA: Tables 2.4 and 2.5) that both lower productivity of the site and outcompete desirable native vegetation. Alternatives to imazapic for invasive annual grasses do not exist to effectively reduce the aggressive expansion nature of these species.

The comment also identifies the need for prevention efforts. Public awareness efforts, resting areas from grazing during recovery, Best Management Practices (BMPs) for vehicle washing and avoiding unintended incidental seed transfer, and seeding and plantings are a critical component of the Vale District's invasive weed management and Emergency Stabilization and Rehabilitation programs and direction. (EA: Design Features, pp.16-18). V

Vale BLM also coordinates with partners, neighboring private land owners and other restoration efforts to minimize additional infestations. Objective 3, Management Actions of the Rangeland Vegetation section of the SEORMP is: **"The distribution and density of noxious weeds will be reduced through the application of approved control methods in an integrated program in cooperation with the State of Oregon, Malheur County, and other adjoining counties, adjoining private landowners, and other affected agencies and interests."** This partnership encourages minimizing transfer and introduction of seed between land ownerships through common BMPs.

## **Comment #2**

The commenter expresses a concern that inadequate analysis of cumulative impacts is provided in the EA for the widespread use of herbicides on public lands.

### **BLM Response:**

Cumulative impacts are a fundamental component of the analysis in the EA. The cumulative effects for each alternative are addressed by resource in Chapter III. For each resource, interdisciplinary team (IDT) discussion identified the appropriate cumulative effects analysis area (CEAA) which would be appropriate to analyze the direct, indirect and cumulative impacts by intensity and duration of the past, current and reasonably foreseeable future

actions. Actions analyzed in the two alternatives incorporated identified historic treatments – including herbicides – within the CEAs by resource.

BLM recognizes that herbicide use is one tool among many to counteract the proliferation and impacts of continued invasive and noxious weeds. BLM and nearby private and other public land management entities are coordinating on an integrated approach to reduce the growing extent of invasive species. Herbicides are a component of this effort, and the BLM recognizes that federal and non-federal entities may shift to more effective herbicides for invasive and noxious weed treatments.

### **Comment #3**

The commenter made several references to the Malheur National Forest and the decisions made there for the use of herbicides.

#### **BLM Response:**

The BLM is currently not authorized to use the same herbicides as the Forest Service. “In general, the availability of a broader range of herbicides permits selection of the one that best accomplishes the control objective while minimizing site-specific adverse effects. In addition, having more than one herbicide to control a plant helps avoid having invasive plant populations develop resistance.”

The use of the currently authorized four herbicides and the additional three herbicides added in the Proposed Action have been analyzed and approved for use on Public Lands through the 2007 PEIS and 2010 Oregon FEIS. Under the appropriate conditions and applied within restrictions (EA: Table 2.3, Table 2.4 and Appendix A - SOPs, BMPs and Design Features), BLM would implement the selected alternative with an informed understanding of impacts, as analyzed in Chapter III of the EA.

### **Comment #4**

The use of certain chemicals “(such as 2,4-D, Dicamba and Picloram which should be dropped entirely from use on public lands).”

#### **BLM Response:**

The District has considerable experience using these herbicides and their effects on target and non-target vegetation, and these herbicides remain effective because they are often the best choice for many situations. In general, the availability of a broader range of herbicides permits the selection of the one that would best accomplish the control objective while minimizing site-specific adverse effects. Different herbicides are used for different species, different site conditions (near water, neighboring plant species, soil type), and different stages of plant growth. For example, picloram + 2,4-D would still be used to effectively treat starthistles under the Proposed Action where soils are not sandy, water bodies are not nearby and during the rosette to flowering stage. But clopyralid + 2,4-D would also be available to treat starthistle in the seedling to bud stage (*Treatment Key*, Table 2.4, EA:26-29). In general, the use of the four currently authorized herbicides would decrease with the availability of the three additional herbicides (USDI 2010:136).

#### **Comment #5**

“What are the cumulative impacts of over 150,829 acres of current and ongoing aerial herbicide spraying of ~2-5 years in the Vale BLM District?”

#### **BLM Response:**

As discussed in Comment No. 2 above, analyses of cumulative impacts is established by resource in Chapter III of the Bendire EA. Each resource section defines the Cumulative Effects Analysis Area. Application of imazapic to approximately 30,000 acres within the project area is expected to be limited by: low application rate; BMPs, SOPs and herbicide label restrictions (EA: Appendix B); and timing to limit adverse effects and off-site movement of the herbicide such that the CEAA is adequate to predict cumulative effects.

The project area within which all Bendire Complex Fire ESR Invasive Plant Management actions are considered is approximately 54,000 acres. Cumulative impacts of actions within the project area are not expected beyond those analyzed by resource (Chapter III). Cumulative impacts of the actions in other areas were not considered if outside of the CEAA for each resource.

#### **Comment #6**

The commenter suggests that aerial applications of Imazapic are “entirely inappropriate for attempting to control invasive annual grasses (p.2).

#### **BLM Response:**

An alternative that does not try to control invasive annual grasses would not meet the Purpose and Need of the EA. As described in the EA, BLM is proposing a mixture of both non-herbicide and herbicide methods where appropriate and uses the lowest risk, most effective approach feasible for each (EA:55-62). However, non-herbicide methods are not sufficient to control invasive plants (including annual grasses), as was described in the Oregon FEIS (USDI 2010a:27). Recent fires - and the dramatic increase in invasive annual grasses following - in and near the Bendire Complex fire show broad extent of invasive annual grasses in the project area and their potential for rapid spread and resource degradation. The *Noxious and Invasive Weeds* section in Chapter III further describes the limitations of manual and mechanical methods of treating invasive annual grasses, as well as the lack of selective control possible with the four herbicides currently available (EA:59-62). One species of invasive annual grasses prevalent on the District (cheatgrass) cannot be treated at all under the No Action Alternative because it is not listed as noxious.

ESR monitoring of herbicide treatments of imazapic after the 2014 Buzzard Complex Fire (DOI-BLM-OR-V040-2014-076-EA and Decision) are showing promising results and indicate BLM can meet the purpose and need without undue resource damage. Results of proactive imazapic treatments (2013, before the Buzzard Complex fire) on private and Division of State Lands reinforce BLM’s decision to treat medusahead and cheatgrass under the similar site conditions found in the Bendire Complex Fire ESR Project Area.

As discussed above, without effective controls offered, invasive annual grasses would continue to increase in size and density, displacing native vegetation, preventing wildfire

rehabilitation, degrading Greater Sage-Grouse habitat, and increasing the risk of wildland fire.

#### **Comment #7**

The commenter suggests that “extremely toxic herbicide application...” is inappropriate for attempting to control the very small acreage of invasive plants for 35-65 acres of the project (p. 2).

#### **BLM Response:**

The management of small infestations of invasive plants with a high potential to spread is one of the project’s treatment priorities (EA:11). The BLM has found through implementation of its invasive plant management program that it is more effective to control small infestations before they spread further than to allow an infestation to spread without control until it is large enough to cause negative ecological effects (EA:17 and Noxious and Invasive Weeds section EA:59-63). The effects to specific resources of these herbicides, both beneficial and adverse, are detailed throughout resource sections in Chapter III (*Affected Environment and Environmental Consequences*).

Imazapic is a member of the imidazolinone class of herbicides that selectively inhibits acetohydroxyacid synthetase, an enzyme in certain plant's biosynthetic pathway of three amino acids - valine, leucine, and isoleucine. In contrast to plants, mammals do not possess the pathway to synthesize these three amino acids, and therefore are NOT susceptible to the primary effect pathway of imazapic (USEPA 2001a) *Acute Toxicity*: Imazapic results in low acute toxicity by oral, dermal and inhalation routes of exposure, as well as eye and skin irritation. All studies are in Toxicity III or IV. Imazapic is not a dermal sensitizer (USEPA 2001a). Risk Assessments on the other six herbicides only hit the High category in the case of direct spray or accidental spill.

*Acute Toxicity* is measured by oral, dermal, inhalation, eye as routes of exposure and skin as contact irritation. Toxicity level definitions: I is Highly Toxic; II is Moderately Toxic; III is Low and IV is Very Low. 2,4-D = Tox III or IV except salt or acid forms are I for eye exposure; Glyphosate = III or IV all routes of exposure; Dicamba = Tox III or IV except I for eye exposure; Picloram = III or IV except II for eye exposure; Chlorsulfuron = III or IV all routes of exposure; Clopyralid = III - IV all routes of exposure. Highest risk would be to mixer/loader/or applicator, not general public.

#### **Comment #8**

The commenter recognizes the importance of implementing strategies that serve as a package of invasive species prevention (p.3).

#### **BLM Response:**

The Bendire EA expressly follows the Integrated Plant Management guidance (BLM Handbook 1740-2, EA:12) as a program of weed prevention, control, competitive plantings of native species and desired non-native vegetation to restore natural function. The Bendire EA expressly is a component of this integrated approach. Various Best Management Practices, Design Features, public outreach and information, and Standard Operating

procedures are a part of this package. Resource Objectives of the Bendire EA (EA: 7-8) include Vegetation Goal VG-3 from the ARMPA to “Use integrated management to control, suppress, and eradicate invasive plant species...”

#### **Comment #9**

Aerial applications should be dropped for all herbicides (p.3)

##### **BLM Response:**

The BLM considered no aerial application of herbicides (EA:15). This alternative was eliminated from detailed study because it was previously considered in the 2007 PEIS<sup>1</sup> and, as described in the Oregon FEIS, it was rejected because large expanses of cheatgrass and other invasive plants in remote areas or areas with rugged terrain would be difficult and cost-prohibitive to treat (USDI 2007a:2-19). The only aerial application that would happen under the Proposed Action<sup>2</sup> is for the treatment of invasive annual grasses with the herbicide imazapic (EA:21).

Under both alternatives, ground-based broadcast spraying<sup>3</sup> of invasive plants would occur in large monocultures and / or with selective herbicides. While the majority of the invasive plant sites are less than an acre, larger infestations of invasive plants would be difficult to manage without broadcast spraying.

#### **Comment #10**

2,4-D, Dicamba, Glyphosate and Picloram should be “canceled” (p.3).

##### **BLM Response:**

Similar to discussion regarding 2,4-D, the District has considerable experience using these herbicides and their effects on target and non-target vegetation, and these herbicides remain effective because they are often the best choice for many situations. In general, the availability of a broader range of herbicides permits selection of the one that would best accomplish the control objective while minimizing site-specific adverse effects. Different herbicides are used for different species, different site conditions (near water, neighboring plant species, soil type), and different stages of plant growth. For example, picloram + 2,4-D would still be used to effectively treat starthistles under the Proposed Action where soils are not sandy, water bodies are not nearby and during the rosette to flowering stage. But clopyralid + 2,4-D would also be available to treat starthistle in the seedling to bud stage (Treatment Key, EA:26-28)

#### **Comment #11**

The use of many (if not all) herbicides should not be implemented until the Vale District Integrated Invasive Plant Management EA is finalized (p.3).

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<sup>1</sup> The Oregon FEIS, to which this EA tiers, tiers to the 2007 *Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement* (PEIS) (EA:9)

<sup>2</sup> Aerial application of herbicides is allowed under the No Action Alternative. However, currently there are not any invasive plant infestations on the District where aerial application would be appropriate, given infestation sizes and selectiveness of the available herbicides. Aerial application of herbicides has not happened under the No Action Alternative in the past eight years.

<sup>3</sup> An application of an herbicide that uniformly covers an entire area. A short description of herbicide treatment methods can be found in the EA (EA:21-22) and a more thorough discussion in the Oregon FEIS (USDI 2010a:70-72)

*BLM Response:*

Vale BLM is currently reviewing public comments on the District Invasive Plant Management EA and plans to issue a final Decision later this fiscal year. The emergency nature of rehabilitating the Bendire Complex Fire burned area requires BLM to analyze the effects of treatments that meet resource objectives (EA:7-8) of the Bendire Complex Fire ESR plan. However, the Vale Integrated Invasive Plant Management EA is consistent with – and potential impacts analyzed are considered in – this EA.

The BLM was limited to four herbicides following a 1984/1987 injunction against the agency. A settlement agreement in 2010 allows the BLM to use herbicides other than the four previously agreed to, provided that there is site specific analysis tiered to the 2010 Oregon FEIS or 2007 National PEIS on herbicides, or similar state or national analysis.

**Comment #12**

The commenter suggested that NEPA was violated in several ways:

1. Overly narrow construction of the purpose and need.

*BLM Response:*

The Bendire Complex Fire ESR Invasive Plant Management EA was developed under the National and District ESR guidance and direction to mitigate adverse impacts of wildfire, to facilitate restoration of impacted resources, and is tiered and/or referenced to the Greater Sage-Grouse ARMPA FEIS (2015), SEORMP FEIS (2000) and NFESRP EA (2005). See Tiering and Reference section of EA (EA:9-10) and the Conformance section (EA:10-14) The Purpose and Need is designed to meet the identified objectives (EA: 7-8), and are appropriately focused on rehabilitating and stabilizing resources impacted by the fires and on restoring sagebrush landscapes.

2. Failure to provide an adequate range of alternatives and the no action alternative should be a “no herbicide” alternative.

*BLM Response:*

A broader range of alternatives were considered by the IDT and were rejected because both to meet the purpose and need and the emergency nature of stabilizing and rehabilitating the burned area would not occur. A “no herbicide” alternative was considered but eliminated from further analysis (EA: 16) because no other method will result in desired objectives to restore natural vegetative function.

3. Failure to address direct, indirect and cumulative effects adequately.

*BLM Response:*

See responses to Comment #16 below.

#### 4. Failure to address scientific controversy and methodology

##### BLM Response:

The use of herbicides on public lands was analyzed in the 2007 PEIS and 2010 Oregon FEIS (See Appendices: 2-SOPs and MMs, 4-Protocol for Identifying; Evaluating and Using New Herbicides; and 8-Human Health and Ecological Risk Assessments). These procedures were utilized in the Bendire EA and were incorporated by reference, as was addressing Risk and the Methodology for Assessing Effects (FEIS: 92). The methodology used – and consideration of uncertainty and controversy – (see for analysis of impacts directly from the herbicides in these two NEPA documents) was drawn on for the Bendire EA. Site specific analyses in the Bendire followed these requirements and processes.

##### **Comment #13**

The commenter indicates, “... it is not clear that such a large scale project should be carried out as part of an ESR plan. Large scale herbicide spraying is likely to cause significant effects on the environment, and potential effects on the human and natural environment should be analyzed in an EIS.” (p.3)

##### BLM Response:

The Bendire EA proposed action was designed to provide emergency stabilization of sagebrush steppe ecosystem which is known to be vulnerable to invasion by invasive annual grasses following a wildfire disturbance. The scale of the treatments was dictated by the scale of the disturbance and the pre-fire abundance of invasive annual grasses in the area. The second highest priority (after public safety) for protection in the DOI Burned Area Emergency Stabilization and Rehabilitation program is habitat for listed, proposed, or candidate threatened or endangered species (BLM Handbook H-1742-1). The project area is priority habitat for greater sage-grouse which is a BLM sensitive species.

Whether an action must be analyzed in an EA or EIS depends upon a determination of the significance of the effects. One of the ten considerations for evaluating intensity is the degree to which effects are likely to be controversial. Public concern or controversy is defined as disagreement within the scientific community about the nature of the effects, not expressions of general opposition to the proposed action or preference among the alternatives (40 CFR 1508.27(b)(4)).

Uncertainty is defined as the degree to which effects are highly uncertain or involve unique or unknown risks (40 CFR 1508.27(b)(5)). The EPA requires pre-market multiple toxicity tests, persistence and environmental fate tests prior to registration of herbicide products. The toxicity tests include mammals, fish, plants, and other taxa. In an effort to evaluate risk to fish and wildlife, EPA also examines ecological risks to fish and wildlife, including federally listed species, prior to registration. All of the herbicides proposed for use in this EA are registered with the EPA. In addition, this analysis relies on BLM or Forest Service-prepared Human Health and Ecological Risk Assessments for each of these herbicides. Risk Assessments are analytical examinations of the potential for adverse effects given modeled and described exposures and doses, and includes an up-to-date review of the best available scientific literature. These Risk Assessments were included in the 2010 Oregon FEIS, to



which this EA tiers. These herbicides are extensively studied and there is enough information available for the decision-maker to understand the potential for environmental effects.

An overview of the EPA and Risk Assessment processes, including a discussion of the types of information they each consider is included as Appendix C of the Bendire EA and incorporated by reference in total from Appendix 13 of the Oregon FEIS (USDI 201a:799-821).

The IDT analyses of Environmental Effects (Chapter III of the EA, by Resource) identified no Adverse or Beneficial Significant Impacts from either of the Alternatives analyzed in the EA and a Finding of No Significant Impacts (FONSI) statement will be issued.

#### **Comment #14**

Commenter suggested the No Action is simply continued action (p.3).

##### **BLM Response:**

As indicated in Comment #12 - (2) above, the No Action alternative is defined as an “alternative that describes the cumulative effects of past, other present and reasonably foreseeable actions, without the effects of the proposed action or action alternatives (NEPA Handbook H-1790-1, p.61).” The No Action alternative serves as a baseline against which the effects of new actions are evaluated. The No Action Alternative in the Bendire EA considers herbicide use with the currently authorized four chemicals as this baseline.

#### **Comment #15**

Indigenous Peoples and Environmental Justice (pp. 3, 4 & 8)

##### **BLM Response:**

The EA specifically identifies two design features to address Native American tribes (specifically the Burns Paiute) to avoid impacts to traditional uses in the project area (EA: 16-18, (a), (b), and (f)).

Chapter III Affected Environment and Environment Consequences, Table 3.1 presents the identified Affected Resources, which includes the following:

1. American Indian Traditional Practices (EA:35-38) identifies; direct, indirect and cumulative effects for the proposed biological thinning treatments, aerial applications and other proposed actions.
2. Project Design Features: (a.), (b.) and (f.) include management requirements that mitigate Environmental Justice impacts. Specifically, item (f.) states: “Where coordination with the Burns Paiute Tribe regarding the District Annual Treatment Plan and subsequent annual Bendire Complex Fire ESR invasive plant proposed actions identifies areas where herbicide use would not be consistent with cultural values and uses; alternatives will be implemented where feasible.” (pp. 16-18).

**Comment #16**

The EA failed to adequately address direct, indirect, and cumulative impacts of the project. – Scientific methodology used in analysis was not adequately disclosed in relation to determination of findings of no significant impacts to the environment, wildlife, aquatic species, and special status plant species (pp. 4 & 5).

**BLM Response:**

Direct, indirect, and cumulative effects were analyzed throughout the EA, including: Cultural Heritage (EA:41-43), Grazing Management and Rangelands (EA:45-48), Wildlife (EA:51-54), Noxious and Invasive Weeds (EA:58-62), ACECs (EA:63-64), Riparian, Aquatic, Fisheries, and Water Quality (EA:67-72), Social and Economic Values (EA:74-76), Soils (EA:78-84), Fire and Fuels (EA:85-87), Vegetation (EA:90-93), and WSAs (EA:96-97). Many sections have few effects, because Standard Operating Procedures, Mitigation Measures, and Project Design Features have reduced or eliminated them. When no direct or indirect effects are associated with either alternative, cumulative effects analysis is not required (CEQ 1999). Table 3.1 (EA:31-33) identifies and provides rationale for resources that are Not Affected by the proposed actions. The project either has no impact on the resources or with the implementation of Project Design Features (EA: 16-18, 22) would have no impact on the resource, thus they were not analyzed further in the EA.

**Comment #17**

Maps provided in the Bendire EA show completed imazapic treatments, including the ACEC. Commenter asks whether these areas were treated before the NEPA process was complete.

**BLM Response:**

The areas identified as having completed imazapic treatments, including the ACECs were analyzed in DNA # DOI-BLM-OR-V000-2016-0001. This decision was signed in October of 2015 (EA:1,34). This decision was appealed on November 21, 2015 and the decision was vacated and remanded on January 5, 2016. All imazapic treatments identified as completed were implemented before the decision was remanded (EA: Map 4).

**Comment #18**

Grazing management and exclosure of livestock grazing until objectives are met (p.5).

**BLM Response:**

The Bendire EA (EA:1) explains that the Bendire Complex Fire Emergency Stabilization & Rehabilitation Non-Herbicide Treatments Decision (DOI-BLM-ORWA-V000-2016-0017-DNA) defines proposed actions to stabilize and rehabilitate the burned area, and references how grazing management will be conducted and resumed once objectives are met.

**Comment #19**

Commenter recommends that an EIS be conducted (p.5).

**BLM Response:**

Significance and the determination of whether to prepare an EIS according to NEPA regulations is defined in terms of context and intensity. Significance varies with the setting of

the Proposed Action and must consider both short and long-term effects. The consideration of intensity must include analysis of both these beneficial and adverse effects, not just a description of the net effects. Only a significant effect triggers the need to prepare an EIS (40 CFR 1508.13).

Consistent with the effects analysis in Chapter III of the EA (see each resource section for the effects determination) and the unsigned FONSI statement, the Proposed Action would not constitute a major federal action that would have significant adverse impacts on the quality of the human environment. Therefore, preparation of an EIS for the Proposed Action is not required.

**Comment #20**

There are no details given as to what level resources are to be recovered before grazing is resumed, what specific standards or conditions indicate sufficient recovery, or how agreements will be communicated or enforced (p.5).

Not clear if monitoring is performed to ensure standards and guidelines are being met (p.5)

**BLM Response:**

Resource objectives used to determine timing on the resumption of grazing will be incorporated into Decisions and Agreements and will be established through future consultation, cooperation and coordination... as per 43 CFR 4110.3-3(b).

Standards and Guidelines for grazing administration are regulated per 43 CFR 4180.2 and are not determined through the Bendire EA.

**Comment #21**

The BLM failed to adequately analyze or avoid potential direct and indirect effects to Honeybees which are Sensitive listed (pp. 5-6).

**BLM Response:**

Honeybees are not listed as BLM Sensitive in OR/WA. Direct, indirect, and cumulative effects on pollinators were adequately analyzed in the EA, on pp. 12-13, 49, 107, 112, 122, and Appendix B – Table 3). SOPs specifically for pollinators are listed on p. 112. There is a long-term benefit from integrated vegetation management activities that control invasive plants and allow native vegetation to reestablish. The Wildlife, SSS and Migratory Birds section (EA:48-54) describes that better control of invasive plants, including invasive annual grasses, would allow for rehabilitation of sites to restore usable wildlife and Special Status species habitat. This includes the improvement of pollinator habitat by removing invasive plants

**Comment #22**

“The BLM did not provide burn severity maps, and it is not clear what parts of the project area may have experienced low, moderate, or no burn severity. This information is critical for submitting informed comments on this project.” (p.5).

*BLM Response:*

As stated in the EA (Upland Vegetation section, Chapter III, EA:87-93) burn severity maps had poor quality and only served as an initial destination for the ID team to begin site visits. Field knowledge of vegetation prior to the burn, and recent experience in burn recovery within, adjacent to and nearby from historic fires have shown that, left untreated, the presence of invasive annual grasses and noxious weeds will readily invade and outcompete desirable native species (EA: 85). An ID team developed the treatment areas and methods utilized in the EA.

Field visits identified treatment area. The intensity of the burn is not the driving factor in imazapic treatments for control of invasive grasses; unburned islands can be vectors for infesting areas burned from low to severe.

**Comment #23**

The BLM failed to analyze and avoid potential direct, indirect, or cumulative effects to Mule deer and Rocky mountain elk (p.6).

*BLM Response:*

Direct, indirect, and cumulative effects on deer and elk are discussed in the EA on pp. 51-54, 126-131, and Appendix B – Table 1. The potential for effects to deer and elk may be limited by the implementation of Standard Operating Procedures and Mitigation Measures (EA: Appendix A); for example, the Mitigation Measure “Impacts to wildlife from herbicide applications can be reduced by treating habitat during times when the animals are not present or are not breeding, migrating, or confined to the local areas” would limit the effects to deer and elk. Effects from herbicides to any fauna would primarily be related to habitat loss. This EA addresses the use of herbicides specifically on invasive plants; while some local fauna may occasionally use invasive plants as habitat, it is generally rare (EA: Wildlife Section, 48-54).

**Comment #24**

Data gaps (p.6)

*BLM Response:*

The effects analysis for the alternatives (Chapter III, by resource), identifies where information is limited. The BLM used the best available information to conduct this analysis. Where information is limited or incomplete, the Interdisciplinary Team conducted field reviews and utilized professional experience and expertise, along with Risk Assessments (FEIS: Appendix 8) to estimate impacts.

**Comment #25**

Direct/Indirect/Cumulative Impacts (p.6).

*BLM Response:*

Addressed above in Comment #17.

### **Comment #26**

The BLM failed to adequately analyze potential direct and indirect effects associated with inerts, surfactants, adjuvants and impurities (p.7).

#### **BLM Response:**

The BLM agrees that certain inert ingredients can be toxic to target and non-target species. As part of the Risk Assessments, the BLM and Forest Service evaluated inert compounds to assess effect on non-target species. Two inert ingredients POEA and R-11, are specifically addressed in Appendix D of the PEIS. R-11 is no longer used by the BLM, and POEA in glyphosate is reflected in the risk category for glyphosate shown in Chapter III and discussed in the various resource sections on the EA. The BLM is prohibited by law from disclosing the actual inert ingredients because they are considered proprietary. The *Adjuvants, Impurities, and Other Ingredients* section in the Oregon FEIS describes the BLM analysis of inerts (USDI 2010a:63). The BLM maintains a list of specific products known to contain only the materials analyzed in the Risk Assessments and to not contain inerts and ingredients not used by the BLM by policy. The list of approved herbicides and formulations is updated annually.

The FEIS review of *Adjuvants, Impurities and Other Ingredients* is incorporated into this EA (FEIS: 624-627).

The EA refers to active ingredients (such as glyphosate, imazapic, or 2,4-D) rather than trade names or formulations (such as RoundUp, Plateau, or Aqua-Kleen) for the herbicides that are discussed. Formulations include active ingredients, adjuvants, and inert ingredients. EPA licensing and BLM and Forest Service Risk Assessments are conducted with the herbicides in formulation form. This allows the ingredients that are included in the formulations beside the active ingredient to be evaluated as part of the overall risk. For example, the Oregon FEIS notes that the Risk Assessment on glyphosate indicates that the adverse effects to fish may be more attributable to the surfactant POEA rather than the active ingredient itself. The BLM and Forest Service evaluated inert ingredients, degradates, adjuvants and tank (combined) mixes in the Risk Assessments. The agencies also review confidential business information (such as the exact formulas) and other information that indicates a very low likelihood that any undisclosed ingredients would have toxic effects on any resource beyond those already described in the Risk Assessments for the herbicides themselves. A list of herbicide formulations approved for use by the BLM at the National level is included in Appendix B of the EA; this list is updated yearly. Many inerts have been found to have high toxicity levels, and inclusion of one or more of those toxic inerts in a formulation would preclude the formulation from being approved by the BLM for use. Appendix 13 of the Oregon FEIS provides further detail about what is evaluated in the BLM and Forest Service Risk Assessments (USDI 201a:804-821).

### **Comment #27**

The BLM also failed to adequately analyze potential direct and indirect effects from possible synergistic interactions associated with the proposed herbicides and the other ingredients within the formulas, or from possible synergistic interactions with the other herbicides or chemicals to be used in or near the project area (p.7).

*BLM Response:*

Herbicides proposed for use are applied individually or as tank mixes, and must follow the herbicide labels for such use. See Bendire EA Treatment Table 2.3 for proposed tank mixes. Other “chemicals” or another herbicide would not be used over the same treatment site at the same time; therefore there is little or no possibility of such synergistic interactions to occur.

A review of labels of each of the seven herbicides considered in this EA showed no incompatibility or restrictions to appropriate tank mixes.

Further, the FEIS addresses “Incomplete and Unavailable Information (FEIS: 114) and are discussed in the Risk Assessment information (FEIS: Appendix 8) and are incorporated by reference into the Bendire EA.

**Comment #28**

Concern regarding spills and spill control plan (p.7).

*BLM Response:*

BLM SOPs and requirements are to prepare an operational and spill contingency plan in advance of treatment (BLM Handbook H-9011-1).

Hazardous materials (particularly petroleum products) would be stored in appropriate and compliant UL-Listed containers and located so that any accidental spill would be fully contained and would not escape to ground surfaces or drain into watercourses. Other hazardous materials, such as corrosives and/or those incompatible with flammable storage would be kept in appropriate separated containment. All construction materials and waste would be removed from the project area (EA:18).

**Comment #29**

Cumulative Effects (p.8)

Non-Target species impacts

*BLM Response:*

Addressed above in Comment #17

The Proposed Action reduces the risk of adverse effects to non-target plants by allowing for a wider range of herbicides that are more selective to the target plant, which reduces the effects on non-target, native vegetation that would remain. The EA states, “There are newer, more selective herbicides available to treat invasive plants. These herbicides can be used in lower quantities, and they pose less environmental and human health safety risk than the four herbicides currently being utilized (USDI 2010a:80 and others). In addition, these additional herbicides were available, invasive plant treatment efficacy would improve from an estimated 60 percent to 80 percent (USDI 2010a:136)”

The EA describes that herbicides have the potential to harm non-target plants through direct spray, overspray, off-site movement, trampling or crushing by the applicator and accidental

spill (Table 2.2; Wildlife Section EA:52; ACECs EA:63-64; Upland Vegetation, EA:90-93). However label restrictions, Standard Operating Procedures, Mitigation Measures and Project Design Features that define their appropriate use and minimize the adverse effects and potential for risk. The effects described in the document are predicated on the application of all of these preventive measures.

**Comment #30**

Private lands commonly use high rates of herbicides. If herbicide use is taking place in proximity to the project area, even if it is not on BLM land, other herbicide and chemical compounds could interact with and compound impacts of the herbicides proposed for spraying in the Bendire Fire plan. In addition, synergistic or antagonistic effects may be present, including in relation to inert ingredients, adjuvants, etc. (p.9).

**BLM Response:**

Invasive plants may also spread to adjacent non-BLM-administered lands, increasing control costs for affected landowners and degrading land values. The BLM participates in cooperative public / private invasive plant control efforts such as the BLM-Malheur County Noxious Weed Partnership, the Jordan Valley Cooperative Weed Management Area (CWMA), and the Tri-County CWMA. However, the BLM's current inability to use herbicides commonly used by cooperators on adjacent lands results in less effective control and / or coordination difficulties.

Since herbicide use on adjacent state and private lands are not conducted by the BLM, they are not considered part of the Proposed Action and the effects of those treatments are addressed, as appropriate, in resources *Cumulative Effects* sections.

Cooperative efforts are a fundamental component of the BLM's Integrated Vegetation Management planning. This effort includes sharing resources and information on treatments and infestations. The objectives include cost effectively treating discovered weed infestations under an EDRR approach (See Noxious and Invasive Weed Section of the EA).

The use of herbicides on private lands is not under the control of the BLM, nor is the estimate of the level of use on these lands available due to the proprietary nature of private ownerships' activities. These are difficult to incorporate into the cumulative effects of the No Action and Proposed action. If SOPs, MMs and design features are followed, the BLM expects that any contribution of herbicides by either the No Action or Proposed Action to listed streams would be negligible. Off-site movement and non-target impacts of herbicides is limited by applying appropriate application restrictions, and is required by private, state, County and federal applicators and contractors.

Private land application of herbicide is constrained by label restrictions and applicator training and certification requirements. Herbicides authorized for use on state and other adjacent non-federal lands is assumed by BLM to be administered properly, and if so, would have negligible or no additional impacts to those implemented under the Alternatives.

### **Comment #31**

Commenter noted decisions under US Forest Service management (p.9).

#### **BLM Response:**

References from the Malheur National Forest Site-Specific Invasive Plants Treatment EIS were reviewed and no different science was found.

An alternative that does not try to control invasive annual grasses would not meet the Purpose and Need of the EA. As described in the EA, BLM is proposing a mixture of both non-herbicide and herbicide methods where appropriate and uses the lowest risk, most effective approach feasible for each project (EA:18-22). However, non-herbicide methods are not sufficient to control invasive plants (including annual grasses), as was described in the Oregon FEIS (USDI 2010a:27). The description of Category B (Invasive Annual Grasses) in Chapter II describes the broad extent of invasive annual grasses on the District and their potential for rapid spread and resource degradation. The Noxious and Invasive Weeds section in Chapter III further describes the limitations of manual and mechanical methods of treating invasive annual grasses, as well as the lack of selective control possible with the four herbicides currently available. Two species of invasive annual grasses prevalent on the District (cheatgrass and ventenata) cannot be treated at all under the No Action Alternative because they are not listed as noxious. Without effective controls offered, invasive annual grasses would continue to increase in size and density, displacing native vegetation, preventing wildfire rehabilitation, degrading Greater Sage-Grouse habitat, and increasing the risk of wildland fire (EA:4-8).

### **Comment #32**

The commenter expressed several concerns regarding water and aquatic resources and water quality:

The Bendire EA notes that, “[w]ithin analysis area sub-watersheds within the CEAA there are four streams identified by the ODEQ as water quality impaired under section 303d of the Clean Water Act. These streams are Bendire, Bully, South Fork of Indian Creek and Clover Creek (ODEQ 2010)” Pg. 10.

We are very concerned about the direct, indirect, and cumulative impacts to these and other streams throughout the project area, and about the potential for degradation of water quality, riparian habitat, fish, and other aquatic and riparian species.

The BLM needs to demonstrate that the Bendire ESR EA, including the extensive herbicide use proposed in the Plan, will not violate the Clean Water Act. The Bendire Fire Plan failed to provide a reasoned decision or clear rationale as to how they concluded water bodies within or near the project area that would not be significantly affected by herbicides through drift or other mechanisms. (p. 11).

Slope steepness and topography can impact the amount of herbicide that reaches a stream or water body. Even slightly soluble herbicides and those strongly adsorbed to soil particles can be carried down slope in storm water, with steeper slopes elevating the hazard (Durkin 2003 in Berg



2004). The Bendire ESR EA-- by continuing to propose extensive aerially spraying and not having adequate restrictions on other proposed herbicides--will not protect water quality or uphold CWA standards.

The BLM (2010) also notes that: *“[d]rift from aerial applications is the process most likely to result in herbicides getting onto non-target areas such as stream channels.”*

BLM Response:

Under both alternatives, impacts to riparian areas, aquatic resources, water quality, fisheries and water resources are minimized or eliminated through adherence to appropriate buffers and other required design features as outlined in Appendix A (See EA:61 and Table 2.2 Herbicide Information EA: 21).)

Implementation procedures would require BLM to use appropriate herbicide-free buffer zones for herbicides not labeled for aquatic use based on risk assessment guidance, with minimum widths from water of 100 feet for aerial, 25 feet for vehicle, and 10 feet for hand spray applications (Bendire EA:63-64, Table 3.9: Herbicides Used for Both Aquatic and Terrestrial Vegetation Control and EA Appendix A pg. 107). Design features and BMPs/SOPs also would maintain buffers between treatment areas and water bodies. Buffer widths should be developed based on herbicide and site-specific conditions to minimize impacts to water bodies.

Under Section 303d of the Clean Water Act, the Oregon Department of Environmental Quality is responsible for establishing water quality standards and monitoring progress towards their achievement. DEQ does this by defining Total Maximum Daily Loads (TMDLs), a calculation of how much pollutant a water body can receive yet still meet water quality standards. Once TMDLs are established, the BLM defines what actions it will take to prevent further impairment of those parameters. BLM does not have a final Water Quality Restoration Plan (WQRP) for the Malheur River Subbasin. A draft plan for the Malheur River Subbasin has been submitted to DEQ, but this has not yet been finalized. Once DEQ reviews and approves final Water Quality Restoration Plans for the subbasin, the actions BLM will take to prevent further impairment of those streams and river segments not meeting water quality standards will be incorporated into the Invasive Plant Management Program.

The EA does not suggest “general” herbicide buffers that apply to all riparian areas unilaterally. However, the EA describes many other types of restrictions for herbicide use in riparian areas that BLM follows that reflect the specific properties of the different herbicides or habitat conditions of the treatment site. These restrictions are compiled from herbicide labels, BLM manuals and other bureau-direction (compiled as Standard Operating Procedures), Mitigation Measure (adopted at the State or National level).

Imazapic is proposed for use on invasive annual grasses in the Proposed Action. These grasses inhabit upland areas. Most herbicide groundwater contamination is caused by “point sources,” such as spills or leaks at storage and handling facilities, improperly discarded containers, and rinses of equipment in loading and handling areas, often into adjacent

drainage ditches. Point sources are discrete, identifiable locations that discharge relatively high local concentrations. In soil and water, herbicides persist or are decomposed by sunlight, microorganisms, hydrolysis, and other factors. Non-point source groundwater contamination of herbicides is relatively uncommon but can occur when a mobile herbicide is applied in areas with a shallow water table. Standard Operating Procedures (EA 122-130) describe that herbicide free buffers would be applied for all waterways (100 feet for aerial and 25 feet for vehicle/broadcast) for herbicides that are not registered for aquatic use (such as imazapic) to minimize the potential for adverse effects.

BMBP only cited a portion of the BLM 2010 OR Veg FEIS, concerning drift from aerial spraying. (Bold and italicized for reference) The full BLM 2010 OR Veg FEIS, pg. 200 citation reads as follows: ***Drift from aerial applications is the process most likely to result in herbicides getting onto non-target areas such as stream channels.*** This is primarily dependent upon the elevation of the spray nozzle, droplet size and air movement. The smaller the droplet, the longer it stays suspended and the farther it can travel.

Spray drift can be reduced by increasing droplet size since wind will move large droplets less than small droplets (Table 4-18). Droplet size can be increased by: 1) reducing spray pressure; 2) increasing nozzle orifice size; 3) using special drift reduction nozzles; 4) using additives that increase spray viscosity; and, 5) using rearward nozzle orientation in aircraft (EA: Appendix A and Imazapic Application Label).

### **Comment #33**

Numerous species including those that are sensitive listed or have special status did not receive adequate analysis in the Bendire EA (p.12).

Also, the BLM (2010) notes on pg. 249 tat [sic]: ***“[m]ammals are more susceptible during pregnancy and larger mammals are more susceptible than small mammals.”*** (p.12).

#### **BLM Response:**

Bats, including Pallid bat, and Townsend’s big-eared bat, Columbia spotted frog and pygmy rabbits are discussed in the EA, p 50. Ferruginous hawks and golden eagles are discussed on p 51 and redband trout are discussed on pp 66. These species, as well as Lewis’s woodpecker and bald eagle, were not specifically analyzed because of their limited occurrence within or near the project (if any). Mojave black-collared lizard, desert horned lizard, and white-tailed antelope squirrel are not BLM Sensitive Species, nor have they been documented in or near the project area. White-headed woodpecker, yellow rails, Crater Lake tight-coiled snail, Lahontan redband shiner, bull trout, Western bumblebee, and silver-bordered fritillary also do not occur in or near the project area. Although these species were not specifically analyzed, small mammals, bats, migratory birds, insects, and aquatic species were analyzed under Wildlife (EA:51-54) and Riparian, Aquatic, and Fisheries (EA:67-72),

The potential for effects to fish and wildlife may also be reduced or eliminated by the implementation of Standard Operating Procedures and Mitigation Measures (EA Appendix A:107) for example, one of the many SOPs for water resources to “Use appropriate herbicide-free buffer zones for herbicides not labeled for aquatic use based on risk

assessment guidance, with minimum widths from water of 100 feet for aerial, 25 feet for vehicle, and 10 feet for hand spray applications” as well as “minimizing off-site drift and mobility of herbicides” would reduce impacts to aquatic species to a negligible level.

BMBP only cited a portion of the BLM 2010 OR Veg FEIS, concerning mammals are more susceptible: (Bold and italicized for reference). The full BLM 2010 OR Veg FEIS, pg. 249 citation reads as follows: *Imazapic* is an ALS-inhibitor that rapidly metabolizes and does not bioaccumulate. It is effective against medusahead, leafy spurge, and cheatgrass, which adversely affect wildlife habitat. Imazapic is not highly toxic to most terrestrial animals.

***Mammals are more susceptible during pregnancy and larger mammals are more susceptible than small mammals.*** Imazapic has low toxicity to honeybees. No adverse short-term exposure risks to birds were noted for imazapic, but some chronic growth reduction was noted. None of the risk categories for susceptible or non-susceptible shows any ratings that exceed the LOC. Imazapic is one of the lowest toxic risks to wildlife of herbicides evaluated in this EIS along with other ALS-Inhibitors (SERA 2004c).

#### **Comment #34**

There should clear project design criteria in the Bendire ESR project to protect wildlife, including no use of bioaccumulating herbicides or herbicides with bioaccumulating contaminants; no broadcast spraying in riparian areas and in other critical habitat such as fawning and calving areas; and no use of the most toxic, persistent, non-selective, and/or mobile herbicides. (p.13).

#### **BLM Response:**

Design Features and SOPs specifically for wildlife, fish and riparian areas are identified on pp. 112-113. Other than imazapic, which does not bioaccumulate in wildlife and has little tendency to bioaccumulate in fish (EA:137-138), applications will be limited to spot and focused applications in small invasive and noxious sites (EA:22). This further reduces the potential risk of the proposed herbicides to bioaccumulate.

#### **Comment #35**

The commenter pointed out that, in the EA The BLM goes on to state that: “[s]ome wildlife species such as elk and occasionally pronghorns ***consume large quantities of grass and are therefore potentially at risk where broad - scale applications of selective herbicides have been made on invasive plants where native grasses exist. Thus, 100 percent grass grazing scenarios were specifically modeled in the Ecological Risk Assessments. However, reaching Ecological Risk Assessment - identified risk levels would be unlikely unless the animals foraged exclusively within the treatment area for an entire day (USDI, 2010:269).***” The commenter expressed concern both regarding direct application of herbicides to wildlife as well as ingestion. Concern was also raised regarding including design features to protect wildlife. (p.13).

#### **BLM Response:**

Spot, small-site and other ground-based herbicide applications are assumed to not impact most wildlife due the direct physical presence of operators or small equipment on the ground. Wildlife would normally move to subsurface dens, hiding cover, or leave the immediate area.

The Ecological Risk Assessments (Incorporated by reference into the EA from Appendices 8 and 9 of the Oregon FEIS and Appendix C of the PEIS) were utilized to determine wildlife impacts, which were shown to be negligible.

The Ecological Risk Assessment for Imazapic – which would be the most likely to impact terrestrial wildlife species due to aerial application - Final Report studied a wide variety of species including pollinating insects, small mammals, large mammals which feed on small mammals, insect-feeding birds, birds that feed on vegetation and fish, and large mammals. Specifically regarding the commenter's concern regarding large mammals, mule deer were studied (ENSR, 2005) as a surrogate species to represent "large mammalian herbivores, including wild horses and burros (Hurt and Grossenheider, 1976,)" The study evaluated multiple sources of contact, including ingestion, which utilized an overestimate of 100% (i.e., no non-treated) consumption of imazapic-treated vegetation .

In all vectors of contact (direct spray, indirect contact with vegetation after spray, and ingestion of vegetation after spray), for all representative species evaluated, a typical application and maximum application rate resulted in "Minimal risk was predicted for terrestrial animals, fish, and aquatic invertebrates (ENSR, 20015:8-1)

As noted in the EA (EA:52), most wildlife avoid areas of large weed infestations, which include the priority areas of invasive annual grass treatments with imazapic. Design features, BMPs, SOPs (EA: Appendix A) specifically avoid spraying during critical wildlife periods. Aerial applications may indeed result in direct dermal contact with the herbicide; however, mammals do not possess the pathway to synthesize the amino acids and therefore are NOT susceptible to the primary effect pathway of imazapic. As incorporated into the EA from the Oregon FEIS (USDI 2010:269) the Ecological Risk Assessment, risk levels would not be reached even with 100 percent grass consumption.

#### **Comment #36**

Don't use herbicides inadequately tested for effects to invertebrates, amphibians, and reptiles or posing risk to these species in riparian habitat or in their suitable habitat where special status, listed, or candidate species may exist (p.13).

The BLM must provide a reasoned decision regarding their determination that there will be no significant impact to aquatic species such as Redband trout and Bull trout. The BLM has failed to show that it is not in violation of the ESA (p.14).

Use of herbicides should be prohibited in or immediately adjacent to wetland habitats, or other areas where listed or sensitive species, including Columbia spotted frog could be present (p.15).

#### **BLM Response:**

Riparian Zones, Wetlands, Fisheries, Water Quality, and T&E Aquatic Species were discussed in the EA on p. 65-72. The potential for adverse effects on riparian, fish and other aquatic resources is minimized for both alternatives by existing Standard Operating Procedures associated with, and specific to, the specific herbicide proposed. Based on the findings of the Ecological Risk Assessments, following Standard Operating Procedures, the potential risk to fish from ingestion or direct contact or depreciation of water quality would

be negligible, especially at the population or watershed level. Effects by herbicide on resources are identified in Table 2, Appendix B from the Oregon FEIS (USDI, 2010).

**Comment #37**

It is still not clear in the EA what waterbodies exist within the project area, how many miles of streams are present, which are fishbearing, what buffers are proposed for the particular waterbodies present, or which site-specific features or mechanisms within area may pose the greatest risk of contamination (p.14).

**BLM Response:**

Water resources have been adequately addressed in the EA. Within the CEAA, there are 192.2 miles of intermittent or seasonal and 14.9 miles of perennial stream miles (EA:65). Four streams are fish bearing (EA: 66), and there are 151 acres of wetlands (EA 66-67). Map 8 in the EA displays water resources.

Buffers for waterbodies are identified in the EA, Appendix A p. 110-111: “Use appropriate herbicide-free buffer zones for herbicides not labeled for aquatic use based on risk assessment guidance, with minimum widths from water of 100 feet for aerial, 25 feet for vehicle, and 10 feet for hand spray applications” and “Maintain buffers between treatment areas and water bodies. Buffer widths should be developed based on herbicide and site-specific conditions to minimize impacts to water bodies.”

**Comment #38**

The BLM needs to disclose and analyze all potential effects from herbicides proposed for use in the Bendire Fire Plan that may harm Sage grouse, including effects from other ingredients in the herbicide formulas such as surfactants, inert ingredients, impurities, adjuvants, etc. (p. 16).

**BLM Response:**

Direct, indirect, and cumulative effects on sage-grouse are discussed in the EA on pp. 49-54. The potential for effects to sage-grouse may be limited by the implementation of Standard Operating Procedures and Mitigation Measures (EA: Appendix A); for example, the Mitigation Measure “Impacts to wildlife from herbicide applications can be reduced by treating habitat during times when the animals are not present or are not breeding, migrating, or confined to the local areas” would limit the effects to sage-grouse.

See also Comment #26 BLM Response relating to surfactants, inert ingredients, impurities, adjuvants.

**Comment #39**

The BLM (2010) states on pg. **350** that “**some chronic growth reduction was noted**” in birds from exposure to certain herbicides. (p.16).

**BLM Response:**

BMBP cited only a portion of the BLM 2010 Oregon FEIS, concerning “chronic growth reduction”. The full BLM 2010 OR Veg FEIS, starting in pg. 249, continued to pg. **250** (not 350), (bold and italicized for reference) reads as follows: Imazapic is an ALS-inhibitor that

rapidly metabolizes and does not bioaccumulate. It is effective against medusahead, leafy spurge, and cheatgrass, which adversely affect wildlife habitat. Imazapic is not highly toxic to most terrestrial animals. Mammals are more susceptible during pregnancy and larger mammals are more susceptible than small mammals. Imazapic has low toxicity to honeybees. No adverse short-term exposure risks to birds were noted for imazapic, but **some chronic growth reduction was noted**. None of the risk categories for susceptible or non-susceptible shows any ratings that exceed the LOC. Imazapic is one of the lowest toxic risks to wildlife of herbicides evaluated in this EIS along with other ALS-Inhibitors (SERA 2004c).

#### **Comment #40**

“The BLM needs to adequately analyze – including the full range of best available science – the effects from proposed large scale aerial and broadcast herbicide spraying to air quality” (p.18).

##### **BLM Response:**

The Bendire EA was tiered to the Oregon FEIS (2010: 165) which concluded that, given appropriate implementation of BMPs, SOPs and Design Features, effects of herbicides to air quality are too small to be measured and would be negligible. By extension, the effect within the Bendire Complex CEAA would have even lower impact.

#### **Comment #41**

Effects to lands with wilderness characteristics, Wilderness Study Areas, Natural Research Areas [sic], and areas with recreational characteristics such as solitude and natural landscape values (p.18).

##### **BLM Response:**

Regarding lands inventoried for, and determined by BLM to possess, wilderness characteristics may be actively managed to allow short term impacts, while restoring or improving those characteristics in the long term (EA:96-97). Reducing fire prone invasive grasses would provide competitive advantages for native species to establish and provide benefits to wilderness characteristics and Research Natural Areas to move toward potential vegetative conditions.

As the EA states, BLM is bound by the 2010 Ninth Circuit Settlement Agreement to not implement any action that would either reduce the wilderness characteristics or preclude BLM for managing wilderness characteristics until a RMP Amendment is completed. The proposed actions in the Bendire EA would conform to those commitments.

Recreation use and values would be enhanced by the reduction of invasive and noxious species, providing enhanced opportunities in the future to achieve a greater opportunity to enjoy natural landscapes on public lands. Manual 1623 states, “RNAs will be managed to preserve and protect key natural attributes (relevant and important values) for which the area was formally recognized. These values were analyzed in the Bendire EA and were determined to not be adversely impacted by herbicide treatments. Manual control methods are not practical for treating invasive annual grasses on the 2,189 acres of RNAs. (See BLM Response to Comment #6).

As the Bendire EA states (EA:57), increased density and presence of invasive annual grasses has occurred since 2012 with the Iron Fire. Both RNAs were sprayed with imazapic in the fall of 2015 under separate NEPA review and Decision.

#### **Comment #42**

While we appreciate the analysis given in the Bendire EA regarding soils, we are concerned that the EA does not include the full range of best available science, or adequately analyze the direct, indirect, or cumulative impacts of herbicide use on soils. The Bendire EA does not adequately disclose or avoid possible unintended impacts, such as negative impacts to soil crusts and the potential increases in invasive plants should have been considered and analyzed by the Bendire Fire Plan (p.19).

#### **BLM Response:**

The effects of the seven herbicides analyzed in the Bendire EA were analyzed in the 2007 PEIS and 2010 Oregon FEIS. Those effects were tiered to in the Bendire EA and are described on pp.78-84. See also Table 3.11: Fate of Herbicides in Soil, which lists the persistence and effects on soils.

Appendix A, Soil Resources (EA:110) states that BLM will “Assess the susceptibility of the treatment site to soil damage and erosion prior to treatment. “ and to “Minimize treatments in areas where herbicide runoff is likely, such as steep slopes when heavy rainfall is expected. “

The EA (pp. 82-83) discussed the impact on Biological Crusts, which states, “In a recent study, a statistically significant association was found between glyphosate and lower frequencies of biological soil crusts (0.03 compared to a control mean of 0.15). The same study found no evidence for association between picloram (0.16) or imazapic (0.11) and diminished biological soil crusts (Von Ries, 2015). Design Features, SOPs, BMPs are addressed in Appendix A and were incorporated in the effects analysis. As described in the Bendire ESR EA (p.83), recovery of Biological Crusts is expected to occur more quickly with the reduction of invasive species.

No detailed soil survey data are available through a Natural Resource Conservation Service (NRCS) Soil Survey; however soil data are available for the BLM through a forth order soil survey developed by the Oregon State Water Resources Board and the Soil Conservation Service in 1969 (EA:69). Field reconnaissance by IDT members evaluated burn severity, visible soils and remaining vegetation and augmented the more general soils data to make determinations on appropriate treatment methods and potential recovery.

Imazapic, clopyralid, and picloram are not registered for use in riparian habitats. The application of Mitigation Measures and Standard Operating Procedures described in Appendix A of the Bendire EA would reduce the potential for these herbicides to reach anaerobic soils. For example, Mitigation Measures and Standard Operating Procedures include guidance about not spraying herbicides when heavy rain is expected, avoiding exposure of large areas when soils are dry and seasonal winds are expected, and establishing appropriate (herbicide-specific) buffer zones.

**Comment #43**

Failure to require any specific and adequate monitoring, or follow-up actions and integrated ecological restoration of lands following dousing with chemicals (p. 17).

**BLM Response:**

Monitoring of ESR treatments currently occurs for a period of three years following submission of a plan. Changes to ESR policy and funding may allow monitoring for up to five years beginning in 2016. Long – term monitoring would be carried out by a program other than ESR such as range or fuels. Specific objectives have not yet been determined for all herbicide treatments but would likely involve attaining a decrease in annual grass foliar cover.

**Comment #44**

The Riparian and Watershed mapping fails to show springs seeps and many other riparian areas (p.3).

**BLM Response:**

The BLM agrees. BLM has added Map 8 - Water Resources to Appendix D.